REMARKS

Claims 1, 3-14, and 16-21 are pending in the application and have been examined. Claims 1, 3-14, and 16-21 stand rejected. Claims 1, 9-14, 16, and 19-21 have been amended, and Claims 8 and 17 have been canceled. No new matter has been introduced. Reconsideration and allowance of Claims 1, 3-7, 9-14, 16, and 18-21 is respectfully requested.

The Claim Objection

The Examiner objected to Claim 9, requesting that the claim be amended to start with the article "A" and to remove the second occurrence of "said." Claim 9 has been amended as requested. Withdrawal of this ground of objection is respectfully requested.

The Rejection of Claims under 35 U.S.C. § 112, Second Paragraph

Claims 9-14 and 16-21 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner finds that the recitations "a DNA construct including a DNA sequence" in Claim 9, "A plant cell as claimed in claim 9" in Claims 10, 13, and 14, "cells claimed in claim 9" in Claim 17, "said DNA sequence expresses that inhibits the production of homologous protein" in Claim 14, and "the construct comprises a DNA sequence" in Claim 16 render these claims unclear.

Claim 9 has been amended to delete the recitation "including a DNA sequence . . . ." Similarly, Claim 16 has been amended to delete the recitation "a DNA sequence . . . ." Claims 10-14 have been amended to recite a plant, rather than a plant cell, and Claim 14 has been amended to clarify that the construct expresses RNA inhibits the production of a homologous protein. Applicants respectfully request withdrawal of this ground of rejection.

The Rejection of Claims under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 1, 3-14, and 16-21 under 35 U.S.C. § 103(a) as obvious over Curtis et al. (1994), *J. Exp. Bot.* 45:1441-9, or Grayburn et al. (1995), *Plant Cell*

14:285-9, in combination with An et al. (1996), *Plant J.* 10:107-21, WO 92/14824 (Hartman et al.), U.S. Patent No. 5,633,437 (Bernasconi et al.), and U.S. Patent No. 6,084,164 (Bidney et al.). According to the Examiner, it would have been obvious to modify the method of producing transformed lettuce of sunflower plants of Curtis et al. or Grayburn et al. by replacing the promoter used with the ACT2 gene promoter taught by An et al. and by introducing any gene of interest linked to the ACT2 promoter, such as the oxox gene of Hartman et al., the ALS gene of Bernasconi et al., or the sequence that expresses antisense RNA to the stearoyl-ACP desaturase transcript. Applicants respectfully disagree.

To more clearly define applicants' invention, Claim 1, from which Claims 3-7, 9-14, 16, and 18-21 depend, has been amended to recite that the RNA expressed from the DNA construct under the control of the *Arabidopsis thaliana* ACT2 gene promoter is stably expressed in the progeny of the plant. As pointed out in the specification, not all promoters are equally effective in all plants (Specification, page 2, lines 10-11). Particularly, heterologous constructs introduced into *Compositae* have been found to result in unstable expression levels due to gene silencing (Specification, page 2, lines 10-11). For example, when transforming lettuce with the GUS gene under the control of the Cauliflower Mosaic Virus (CaMV) 35S promoter, a total inhibition of GUS activity was found in 90% of the T1 progeny (Specification, page 8, line 7, to page 9, line 2). In contrast, applicants have shown that transforming lettuce with the GUS gene operably linked to the ACT2 promoter did not result in a significant loss of GUS activity in the T1 progeny and, therefore, resulted in stable expression of the transgene in the progeny of the transformed plant (Specification, page 7, line 9, to page 9, line 7; Table 1).

Applicants submit that there is no suggestion or motivation in Curtis et al., Grayburn et al., An et al., Hartman et al., Bernasconi et al., or Bidney et al., alone or in combination, to use the ACT2 gene promoter from *Arabidopsis thaliana* to provide stable expression of RNA in the

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progeny of transformed plants, as recited in the pending claims. Curtis et al. and Grayburn et al. describe the development of transformation protocols for lettuce and sunflower, respectively. Curtis et al. discloses that only some of the progeny of transgenic plants expressed a GUS transgene (Curtis et al., page 1448, Column 2, third paragraph). Similarly, Grayburn et al. shows that only 5 of 10 T2 plants showed expression of a GUS transgene (Grayburn et al., page 289, Table 3, Column 2). Neither Curtis et al. nor Grayburn et al. describes or suggests using the ACT2 gene promoter to control expression of transgenes in *Compositae*, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant.

An et al. describes that the *Arabidopsis* ACT2 gene is constitutively expressed in vegetative tissues, and that the ACT2 gene promoter linked to GUS resulted in GUS expression in vegetative tissues of transgenic *Arabidopsis* plants. However, An et al. does not describe or suggest using the ACT2 gene promoter to control expression of transgenes in *Compositae*, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant.

Hartman et al. describes cDNAs encoding oxalate oxidase and prophetic examples for obtaining transgenic sunflower and tomato plants containing an oxalate oxidase expression cassette. Hartman et al. does not describe or suggest using the ACT2 gene promoter from *Arabidopsis thaliana* to obtain transgenic *Compositae* plants, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant.

Bernasconi et al. describes the acetolactate synthase gene and a prophetic example for obtaining transgenic plants containing sequences that code for acetolactate synthase. Bernasconi et al. does not describe or suggest using the ACT2 gene promoter from *Arabidopsis thaliana* to obtain transgenic *Compositae* plants, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant.

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Bidney et al. describes antisense expression of stearoyl-ACP desaturase gene in transgenic sunflower plants. Bidney et al. does not describe or suggest using the ACT2 gene promoter from *Arabidopsis thaliana* to obtain transgenic *Compositae* plants, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant.

None of the cited references, alone or in combination, provide any motivation or suggestion for using the ACT2 promoter from *Arabidopsis thaliana* to obtain transgenic *Compositae* plants, or to obtain stable gene expression in progeny of a transgenic *Compositae* plant. In fact, Curtis et al., Hartman et al., and Bernasconi et al. teach away from the claimed invention by using or recommending the use of the CaMV 35S promoter (Curtis et al., page 1442, Column 2, second paragraph; Hartman et al., page 21, lines 25-26; Bernasconi et al., Column 4, lines 50-53), which has been shown not to provide stable expression in the progeny of transgenic lettuce plants (Specification, page 8, line 7, to page 9, line 2). For these reasons, applicants respectfully request withdrawal of this ground of rejection.

Conclusion

In view of the above amendment and foregoing remarks, applicants respectfully submit that Claims 1, 3-7, 9-14, 16, and 18-21 are in condition for allowance. If any issues remain that

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may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1718.

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

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